

BMP-3

BMP: CONSTRUCTION ROAD STABILIZATION

Definition

The temporary stabilization of access roads, subdivision roads, parking areas, and other onsite vehicle transportation routes with stone immediately after grading.

Purposes

1. To reduce the erosion of temporary roadbeds by construction traffic during wet weather.
2. To reduce the erosion and subsequent regrading of permanent roadbeds between the time of initial grading and final stabilization.

Conditions Where Practice Applies

Wherever stone-base roads or parking areas are constructed, whether permanent or temporary, for use by construction traffic.

Planning Considerations

Areas which are graded for construction vehicle transport and parking purposes are especially susceptible to erosion. The exposed soil surface is continually disturbed, leaving no opportunity for vegetative stabilization. Such areas also tend to collect and transport runoff waters along their surfaces. During wet weather, they often become muddy quagmires which generate significant quantities of sediment that may pollute nearby streams or be transported off site on the wheels of construction vehicles. Dirt roads can become so unstable during wet weather that they are virtually unusable.

Immediate stabilization of such areas with stone may cost money at the outset, but it may actually save money in the long run by increasing the usefulness of the road during wet weather.

Permanent roads and parking areas should be paved as soon as possible after grading. However, it is understandable that weather conditions or the potential for damage may not make paving feasible in the early phases of the development

project. As an alternative, the early application of stone may solve potential erosion and stability problems and eliminate later regrading costs. Some of the stone will also probably remain in place for use as part of the final base course in the construction of the road.

Construction Specifications

Temporary Access Roads and Parking Areas

1. Temporary roads shall follow the contour of the natural terrain to the extent possible. Slopes should not exceed 10 percent.
2. Temporary parking areas should be located on naturally flat areas to minimize grading. Grades should be sufficient to provide drainage but should not exceed 4 percent.
3. Roadbeds shall be at least 4.25 meters (14 feet) wide for one-way traffic and 6.25 meters (20 feet) wide for two-way traffic.
4. All cuts and fills shall be 2:1 or flatter to the extent possible.
5. Drainage ditches shall be provided as needed and shall be designed and constructed in accordance with STORMWATER CONVEYANCE CHANNEL, BMP-17.
6. The roadbed or parking surface shall be cleared of all vegetation, roots and other objectionable material.
7. A 150 millimeter (6-inch) course of coarse aggregate, 50 to 75 millimeter (2 to 3 inch) stone, shall be applied immediately after grading or the completion of utility installation within the right-of-way. Filter fabric may be applied to the roadbed for additional stability. Design specifications for filter fabric can be found within BMP-2, TEMPORARY STONE CONSTRUCTION ENTRANCE. In "heavy duty" traffic situations, stone should be placed at a minimum depth of 200 millimeters (8 inches) to avoid excessive dissipation or maintenance needs.

Permanent Roads and Parking Areas

Permanent roads and parking areas shall be designed and constructed in accordance with applicable local criteria except that an initial base course of gravel of at least 150 millimeters (6 inches) shall be applied immediately following grading.

Vegetation

All roadside ditches, cuts, fills and disturbed areas adjacent to parking areas and roads shall be stabilized with appropriate temporary or permanent vegetation according to the applicable standards and specifications contained in this handbook.

Maintenance

Both temporary and permanent roads and parking areas may require periodic top dressing with new gravel. Seeded areas adjacent to the roads and parking areas should be checked periodically to ensure that a vigorous stand of vegetation is maintained. Roadside ditches and other drainage structures should be checked regularly to ensure that they do not become clogged with silt or other debris.